



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 162536

TO: Michael Bernshteyn
Location: 10D18
Art Unit: 1713
Wednesday, August 31, 2005

Case Serial Number: 10/672946

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Michael Bernshrein Examiner #: 81515 Date: 08/15/05
 Art Unit: 1713 Phone Number 30 _____ Serial Number: 10/672,946
 Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

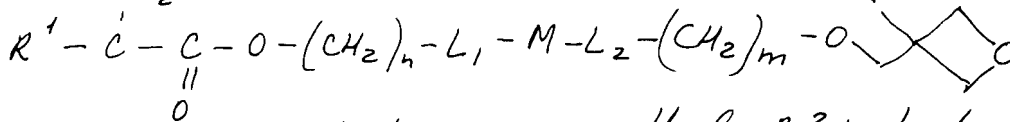
Title of Invention: (Meth)acrylic Compound Having an Oxetanyl Group

Inventors (please provide full names): Takuya Matsumoto, Hitoshi Mazaki,
Toru Nakamura, Masaki Kobayashi

Earliest Priority Filing Date: 10/01/2002

*For Sequence Searches Only: Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

(Meth)acrylic compound (claim 1) having an oxetanyl group



wherein R^1 is hydrogen or methyl, R^2 is hydrogen, methyl, or ethyl, L_1 and L_2 are selected from a single bond, $-O-$, $-O-CO-$, and $-CO-O-$, M is mesogenic group.
 Please, use US 6,660,344 like a good reference, which contains dioxetanes.

SCIENTIFIC REFERENCE BR
 Sci & Tech Inf. Ctr.

AUG 12 2005

Pat. & T.M. Office

Thank you

M. Bernshrein

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>riobla loss</u>	NA Sequence (#) _____	STN <input checked="" type="checkbox"/> _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>3</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <u>1</u>	Dr. Link _____
Date Completed: <u>8/31/05</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>10</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>15</u>	Other _____	Other (specify) _____

=> d his full

(FILE 'HOME' ENTERED AT 11:27:51 ON 31 AUG 2005)

FILE 'HCAPLUS' ENTERED AT 11:28:00 ON 31 AUG 2005

L1 1 SEA ABB=ON PLU=ON US2005101752/PN OR (US2003-672946# OR
JP2002-289227# OR JP2002-289226#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 11:29:46 ON 31 AUG 2005

FILE 'HCAPLUS' ENTERED AT 11:29:46 ON 31 AUG 2005

L2 TRA L1 1- RN : 42 TERMS

FILE 'REGISTRY' ENTERED AT 11:29:46 ON 31 AUG 2005

L3 42 SEA ABB=ON PLU=ON L2

FILE 'WPIX' ENTERED AT 11:29:53 ON 31 AUG 2005

L4 1 SEA ABB=ON PLU=ON US2005101752/PN OR (US2003-672946# OR
JP2002-289227# OR JP2002-289226#)/AP,PRN

=> b hcap d all 11 tot

FILE 'HCAPLUS' ENTERED AT 11:30:21 ON 31 AUG 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Aug 2005 VOL 143 ISS 10

FILE LAST UPDATED: 30 Aug 2005 (20050830/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:286762 HCAPLUS
DN 140:304210
ED Entered STN: 08 Apr 2004
TI (meth)acrylic compound having an oxetanyl group and liquid crystal film
produced by using the same
IN Matsumoto, Takuya; Mazaki, Hitoshi; Nakamura, Toru; Kobayashi, Masaaki
PA Nippon Oil Corporation, Japan
SO Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D305-06
ICS G02F001-13; G02B001-00; C09K019-34
CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 38, 74, 75
FAN.CNT 1

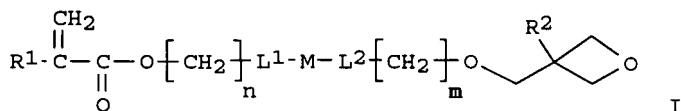
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

Search done by Noble Jarrell

PI EP 1405850 A1 20040407 EP 2003-103578 20030926 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 JP 2004123597 A2 20040422 JP 2002-289226 20021001 <--
 JP 2004123882 A2 20040422 JP 2002-289227 20021001 <--
 US 2005101752 A1 20050512 US 2003-672946 20030926 <--
 CN 1500780 A 20040602 CN 2003-164898 20030929 <--
 PRAI JP 2002-289226 A 20021001 <--
 JP 2002-289227 A 20021001 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1405850	ICM	C07D305-06
	ICS	G02F001-13; G02B001-00; C09K019-34
EP 1405850	ECLA	C07D305/06; C09K019/34A
JP 2004123597	FTERM	4C048/TT02; 4H027/BA13; 4H027/BD12; 4J100/AL08P; 4J100/BA02P; 4J100/BA15P; 4J100/BC43P; 4J100/BC53P; 4J100/CA01; 4J100/DA01; 4J100/DA25; 4J100/DA66; 4J100/JA39
JP 2004123882	FTERM	2H049/BA03; 2H049/BA06; 2H049/BA42; 2H049/BC09; 2H049/BC22; 2H091/FA08X; 2H091/FA08Z; 2H091/FA11X; 2H091/FB02; 2H091/GA01; 2H091/GA06; 2H091/HA07; 2H091/LA12; 2H091/LA16; 4F071/AA33; 4F071/AA81; 4F071/AF12; 4F071/AH16; 4F071/BB02; 4F071/BC01; 4J100/AL08P; 4J100/AL08Q; 4J100/BA02P; 4J100/BA02Q; 4J100/BA15P; 4J100/BA15Q; 4J100/BA40Q; 4J100/BC43P; 4J100/BC43Q; 4J100/BC44Q; 4J100/BC53P; 4J100/CA01; 4J100/CA04; 4J100/DA01; 4J100/DA66; 4J100/JA39
US 2005101752	NCL	526/319.000
	ECLA	C07D305/06; C09K019/34A
OS MARPAT 140:304210		
GI		



- AB The present invention provides a novel compound which is suitable as the starting material of a side-chain type liquid crystalline polymeric substance having a reactive group which is excellent in reactivity upon fixation of the liquid crystal orientation structure. The novel compound is a (meth)acrylic compound having an oxetanyl group represented I, wherein R¹ = H or Me; R² = H, Me, or Et; L¹-M-L² = a mesogen portion; and n, m = 0-10 integer. The present invention also provides a liquid crystal film containing the side-chain type liquid crystalline polymeric substance and a liquid crystal display mounted with such a liquid crystal film. Thus, OXT 101 and Et p-hydroxybenzoate were reacted, hydrolyzed, esterified with protected hydroquinone, and esterified with acryloyl-containing benzoic acid to give an oxetanyl-containing acrylic monomer, which was radical-polymerized to give a liquid crystal polymer with glass transition temperature 81°, weight average mol. weight 39,600, and phase transition (smectic to nematic phase) temperature 170°.
- ST methacrylic compd oxetanyl liq crystal film; ethylhydroxymethyloxetane modified acrylic monomer liq crystal polymer prepn
- IT Liquid crystals, polymeric
 (nematic; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT Acrylic polymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (oxetanyl-containing, liquid crystal polymers; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT Liquid crystal displays
 Liquid crystals, polymeric

Optical films

Polarizers

(preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT Optical instruments

(retarders; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 133945-18-3P 677033-39-5P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(comonomer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 69260-38-4P 69260-40-8P 83883-25-4P 83883-26-5P 125976-71-8P

477949-72-7P 503474-64-4P 677033-29-3P 677033-32-8P 677033-36-2P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 677033-40-8P

RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 677033-44-2P 677033-46-4P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 677033-31-7P 677033-41-9P 677033-42-0P 677033-43-1P 677033-45-3P

677033-47-5P 677033-48-6P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 677033-49-7P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 503474-65-5P 677033-30-6P 677033-33-9P 677033-34-0P 677033-35-1P

677033-37-3P 677033-38-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(monomer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 110-52-1, 1,4-Dibromobutane 120-47-8, Ethyl p-hydroxybenzoate

123-31-9, Hydroquinone, reactions 540-51-2, 2-Bromoethyl alcohol

814-68-6, Acryloyl chloride 818-61-1, 2-Hydroxyethyl acrylate

3047-32-3, OXT 101 4286-55-9, 6-Bromohexyl alcohol 19812-93-2,

[1,1'-Biphenyl]-4-carbonitrile, 4'-hydroxy- 58574-03-1 69260-42-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant in monomer preparation; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

IT 9012-09-3, Triacetyl cellulose

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

=> b wpix

FILE 'WPIX' ENTERED AT 11:30:26 ON 31 AUG 2005

COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE LAST UPDATED: 26 AUG 2005 <20050826/UP>
 MOST RECENT DERWENT UPDATE: 200555 <200555/DW>
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
 PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
 GUIDES, PLEASE VISIT:
<http://thomsonderwent.com/support/userguides/> <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
 DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
 FIRST VIEW - FILE WPIFV.
 FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
 PLEASE CHECK:
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-revision/>
 FOR DETAILS. <<<
 'BIX BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> detail 14 tot

L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2004-378337 [36] WPIX
 DNN N2004-416941 DNC C2004-193631
 TI (Meth)acrylic compound used in side chain-type liquid crystalline
 polymeric substance, comprises oxetanyl group.
 DC A89 E13 L03 P81 U11
 IN KOBAYASHI, M; MATSUMOTO, T; MAZAKI, H; NAKAMURA, T
 PA (NIOC) NIPPON OIL CORP; (NIOC) NIPPON OIL CO LTD
 CYC 35
 PI EP 1405850 A1 20040407 (200436)* EN 37 C07D305-06
 R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
 MC MK NL PT RO SE SI SK TR
 JP 2004123597 A 20040422 (200436) 22 C07D305-06
 JP 2004123882 A 20040422 (200436) 24 C08J005-18
 KR 2004030331 A 20040409 (200453) C07D305-06
 CN 1500780 A 20040602 (200465) C07D305-06
 US 2005101752 A1 20050512 (200533) C07D305-02 <--
 ADT EP 1405850 A1 EP 2003-103578 20030926; JP 2004123597 A JP 2002-289226
 20021001; JP 2004123882 A JP 2002-289227 20021001; KR
 2004030331 A KR 2003-67727 20030930; CN 1500780 A CN 2003-164898 20030929;
 US 2005101752 A1 US 2003-672946 20030926
 PRAI JP 2002-289227 20021001; JP 2002-289226
 20021001
 IC ICM C07D305-02; C07D305-06; C08J005-18
 ICS C08F020-26; C08F220-10; C09K019-34; C09K019-38; G02B001-00;
 G02B005-30; G02F001-13; G02F001-13363
 AB EP 1405850 A UPAB: 20040810
 NOVELTY - A (meth)acrylic compound comprises oxetanyl group.
 DETAILED DESCRIPTION - The (meth)acrylic compound comprises oxetanyl
 group of formula (1).
 R1 = H or methyl;
 R2 = H, methyl, or ethyl;
 L1, L2 = single bond, -O-, -O-CO-, or -CO-O-;
 M = -P1-L3-P2-L4-P3, -P1-L3-P3, or -P3-;
 P1, P2 = group of formula (5);
 P3 = group of formula (6); and
 L3, L4 = single bond, -CH=CH-, -C-, C-, -O-, -O-CO-, or -CO-O-.
 An INDEPENDENT is also included for a method for producing a liquid

crystal film.

USE - The invention is used in obtaining side chain-type liquid crystalline polymeric substance for liquid crystal material used in optical film consisting of retardation film, color compensation film, viewing angle improving film, circular polarizing film, or an optical rotatory film (claimed).

ADVANTAGE - The invention provides polymeric substance having a reactive group that is excellent in reactivity upon fixation of the liquid crystal orientation structure.

DESCRIPTION OF DRAWING(S) - The figure shows ¹H-NMR (sic) spectrum of acrylic compound.

Dwg.1/13

FS CPI EPI GMPI

FA AB; GI; DCN

MC CPI: A01-D10; A04-F06E4; A09-A02A; A12-L03B; E07-A03C; L03-D01D1
EPI: U11-A03A

=> b home

FILE 'HOME' ENTERED AT 11:30:31 ON 31 AUG 2005

=>

=> d his full)

(FILE 'HOME' ENTERED AT 11:27:51 ON 31 AUG 2005)

FILE 'HCAPLUS' ENTERED AT 11:28:00 ON 31 AUG 2005

L1 1 SEA ABB=ON PLU=ON US2005101752/PN OR (US2003-672946# OR
JP2002-289227# OR JP2002-289226#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 11:29:46 ON 31 AUG 2005

L2 FILE 'HCAPLUS' ENTERED AT 11:29:46 ON 31 AUG 2005
TRA L1 1- RN : 42 TERMS

FILE 'REGISTRY' ENTERED AT 11:29:46 ON 31 AUG 2005

L3 42 SEA ABB=ON PLU=ON L2

FILE 'WPIX' ENTERED AT 11:29:53 ON 31 AUG 2005

L4 1 SEA ABB=ON PLU=ON US2005101752/PN OR (US2003-672946# OR
JP2002-289227# OR JP2002-289226#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 11:33:23 ON 31 AUG 2005

L5 STR
L6 0 SEA SSS SAM L5
L7 22 SEA SSS FUL L5
L8 9 SEA ABB=ON PLU=ON L7 AND L3

FILE 'HCAPLUS' ENTERED AT 11:41:54 ON 31 AUG 2005

L9 6 SEA ABB=ON PLU=ON L7

FILE 'HCAOLD' ENTERED AT 11:42:01 ON 31 AUG 2005

L10 0 SEA ABB=ON PLU=ON L7

FILE 'USPATFULL, USPAT2' ENTERED AT 11:42:10 ON 31 AUG 2005

L11 5 SEA ABB=ON PLU=ON L7

FILE 'HCAPLUS' ENTERED AT 11:43:09 ON 31 AUG 2005

L12 E MATSUMOTO T/AU
1451 SEA ABB=ON PLU=ON ("MATSUMOTO T"/AU OR "MATSUMOTO T T"/AU)
E MATSUMOTO TAKUYA/AU

L13 217 SEA ABB=ON PLU=ON ("MATSUMOTO TAKUYA"/AU OR "MATSUMOTO
TAKUYA"/AU)
E TAKUYA M/AU

L14 2106 SEA ABB=ON PLU=ON ("NAKAMURA T"/AU OR "NAKAMURA T J"/AU OR
"NAKAMURA T K M"/AU OR "NAKAMURA T M"/AU OR "NAKAMURA T S"/AU
OR "NAKAMURA T T"/AU OR "NAKAMURA T Y"/AU OR "NAKAMURA TA"/AU)
E NAKAMURA TORU/AU

L15 445 SEA ABB=ON PLU=ON ("NAKAMURA TORU"/AU OR "NAKAMURA TORU C O
NIPPON OIL C"/AU OR "NAKAMURA TORU M"/AU)
E KOBAYASHI M/AU

L16 1471 SEA ABB=ON PLU=ON ("KOBAYASHI M"/AU OR "KOBAYASHI M A R"/AU
OR "KOBAYASHI M C"/AU OR "KOBAYASHI M H"/AU OR "KOBAYASHI M
M"/AU OR "KOBAYASHI M N"/AU)

L17 559 SEA ABB=ON PLU=ON "KOBAYASHI MASA AKI"/AU
E KOBAYASHI MASA AKI/AU
E NIPPON OIL/CS,PA
E JAPAN OIL/CS,PA
E NIPPON PETRO/CS,PA

L18 7519 SEA ABB=ON PLU=ON ((NIPPON OR JAPAN) (W) (OIL OR PETRO?))/CS,PA
L19 3 SEA ABB=ON PLU=ON L9 AND (L12 OR L13 OR L14 OR L15 OR L16 OR
L17 OR L18)

L20 3 SEA ABB=ON PLU=ON L9 NOT L19

FILE 'USPATFULL, USPAT2' ENTERED AT 11:48:07 ON 31 AUG 2005

D BIB TOT L11
SEL AN L11 1-3

Search done by Noble Jarrell

L21 3 SEA ABB=ON PLU=ON ("2004:267469"/AN OR "2005:118477"/AN OR
 "2005:96606"/AN) AND L11
 L22 2 SEA ABB=ON PLU=ON L11 NOT L21

=> b reg

FILE=REGISTRY ENTERED AT 11:52:33 ON 31 AUG 2005
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 30 AUG 2005 HIGHEST RN 862155-39-3
 DICTIONARY FILE UPDATES: 30 AUG 2005 HIGHEST RN 862155-39-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

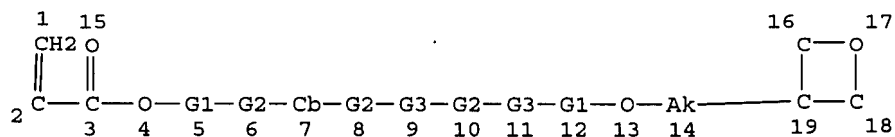
 *
 * The CA roles and document type information have been removed from *
 * the IDE default display format and the ED field has been added, *
 * effective March 20, 2005. A new display format, IDERL, is now *
 * available and contains the CA role and document type information. *
 *

Structure search iteration limits have been increased. See HELP SLIMITS
 for details.

Experimental and calculated property data are now available. For more
 information enter HELP PROP at an arrow prompt in the file or refer
 to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que sta 17

L5 STR



REP G1=(0-1) AK
 REP G2=(0-2) A
 REP G3=(0-1) CB
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L7 22 SEA FILE=REGISTRY SSS FUL L5

100.0% PROCESSED 102664 ITERATIONS
 SEARCH TIME: 00.00.02

22 ANSWERS

=> b hcap

FILE 'HCAPLUS' ENTERED AT 11:52:43 ON 31 AUG 2005
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Aug 2005 VOL 143 ISS 10
 FILE LAST UPDATED: 30 Aug 2005 (20050830/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all fhatstr l19 tot

L19 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2005:345944 HCAPLUS
 DN 142:393194
 ED Entered STN: 22 Apr 2005
 TI Polymerizable liquid crystalline composition and liquid crystal film produced from the same
 IN Seki, Takashi; Matsumoto, Takuya; Nakamura, Toru; Mazaki, Hitoshi
 PA Nippon Oil Corporation, Japan
 SO Eur. Pat. Appl., 19 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C09K019-34
 ICS C09K019-38; C09K019-46; G02B005-30
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 74, 75
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1524309	A1	20050420	EP 2004-24080	20041008
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2005141206	A2	20050602	JP 2004-299276	20041013
US 2005082513	A1	20050421	US 2004-965180	20041014
PRAI JP 2003-355498	A	20031015		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1524309	ICM	C09K019-34
	ICS	C09K019-38; C09K019-46; G02B005-30
EP 1524309	ECLA	C09K019/34A; C09K019/34A2; C09K019/38B4B
JP 2005141206	FTERM	2H049/BA06; 2H049/BA42; 2H049/BC02; 2H049/BC09; 2H049/BC22; 2H091/FA12X; 2H091/FA12Z; 2H091/FA14X; 2H091/FA14Z; 2H091/FB02; 2H091/FB04; 2H091/FB12; 2H091/FC01; 2H091/FD03; 2H091/FD06; 2H091/FD15; 2H091/LA30

Search done by Noble Jarrell

US 2005082513 NCL 252/299.010
ECLA C09K019/34A; C09K019/34A2; C09K019/38B4B
OS MARPAT 142:393194
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Liquid crystalline compns. are disclosed comprising (A) an oxetane compound having an optically active portion, (B) a side chain liquid crystalline polymeric substance having an oxetanyl group, and (C) a photo cation generator and/or a thermal cation generator. The use of the composition can provide a cholesteric-aligned liquid crystal film with excellent alignment retention properties after being fixed in the liquid crystal state and mech. strength, without employing any complicated step such as photo irradiation under an inert gas atmospheric A typical optical film was manufactured by dissolving 0.6 g oxetanyl compound I and 0.94 g copolymer of 20% oxetanyl acrylate II and 80% oxetanyl-free acrylate III in cyclohexane, adding 0.1 g propylene carbonate solution of 50% triarylsulfonium hexafluoroantimonate, filtering, spin-coating on polyethylene naphthalate film, drying at 60°, heating 5 min at 150°, and transferred to a triacetylcellulose film using a UV-curable adhesive.

ST optically active liq cryst oxetanyl acrylate polymer film

IT Liquid crystals, polymeric
Optical films
(curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

IT Molecular orientation
(photoinduced; curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

IT 652-67-5, Isosorbide 3047-32-3, OXT 101 18531-99-2,
S-(-)-1,1'-Bi-2-naphthol
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinker precursor; curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

IT 849798-62-5P 849798-63-6P 850039-25-7P
RL: IMF (Industrial manufacture); PREP (Preparation)
(curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

IT 9012-09-3, Triacetylcellulose
RL: TEM (Technical or engineered material use); USES (Uses)
(optical film alignable support; curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Fan, G; POLYMER PREPRINTS 2002, V43(1), P668 HCAPLUS
(2) Kaminade, T; WO 02100918 A 2002
(3) Kaminade, T; EP 1422255 A 2004 HCAPLUS
(4) Koninkl Philips Electronics Nv; WO 0228985 A 2002 HCAPLUS
(5) Nippon Oil Corp; WO 03029235 A 2003
(6) Nippon Oil Corp; EP 1428823 A 2004 HCAPLUS

IT 849798-62-5P
RL: IMF (Industrial manufacture); PREP (Preparation)
(curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

RN 849798-62-5 HCAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(3-ethyl-3-oxetanyl)methoxy]butoxy]benzoate], polymer with 4-cyanophenyl

4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate and 4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[(3-ethyl-3-oxetanyl)methoxy]benzoate (9CI) (CA INDEX NAME)

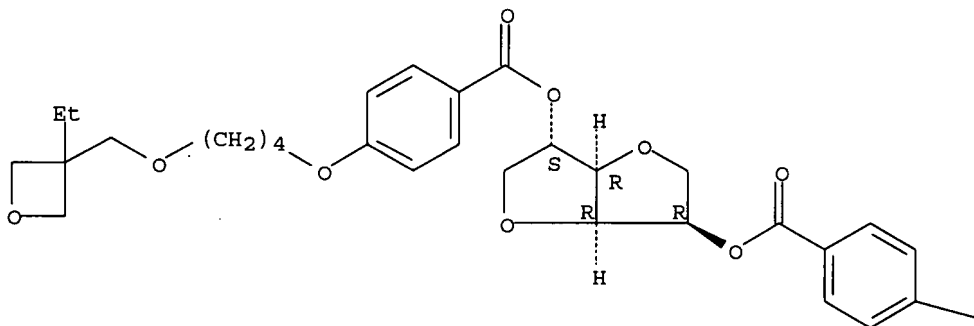
CM 1

CRN 849798-61-4

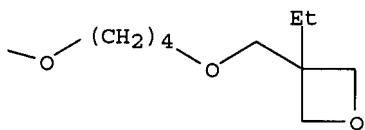
CMF C40 H54 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

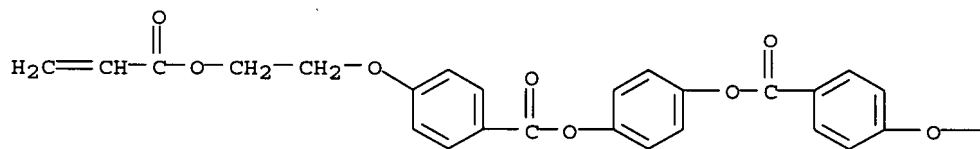


CM 2

CRN 677033-30-6

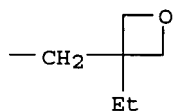
CMF C31 H30 O9

PAGE 1-A



Search done by Noble Jarrell

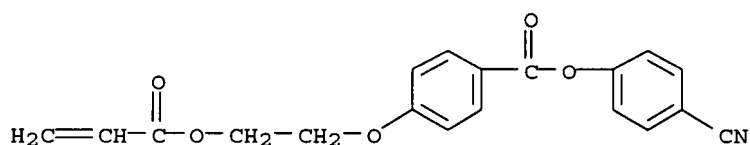
PAGE 1-B



CM 3

CRN 83847-12-5

CMF C19 H15 N O5



L19 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:876007 HCAPLUS

DN 141:372868

ED Entered STN: 22 Oct 2004

TI Liquid crystal film and liquid crystal display device

IN Matsumoto, Takuya; Mazaki, Hitoshi; Nakamura, Toru;
Seki, Takashi

PA Nippon Oil Corporation, Japan

SO Eur. Pat. Appl., 34 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09K019-38

ICS C09K019-34

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

Section cross-reference(s): 38, 75

FAN.CNT 1

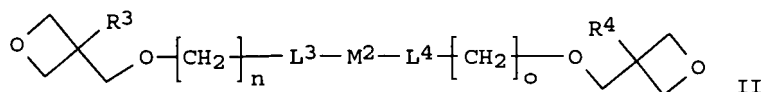
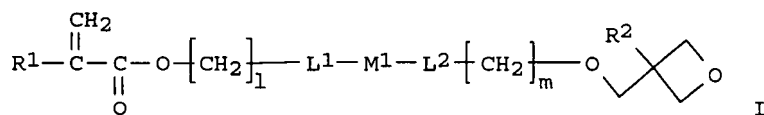
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1469058	A1	20041020	EP 2004-9010	20040415
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	JP 2004315736	A2	20041111	JP 2003-114322	20030418
	US 2004209006	A1	20041021	US 2004-825557	20040414
PRAI	JP 2003-114322	A	20030418		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1469058	ICM	C09K019-38
	ICS	C09K019-34
EP 1469058	ECLA	C09K019/34A; C09K019/38B4B
JP 2004315736	FTERM	2H049/BA06; 2H049/BA07; 2H049/BA42; 2H049/BC02; 2H049/BC22; 2H091/FA11X; 2H091/FA11Z; 2H091/FB02; 2H091/FC22; 2H091/GA06; 2H091/LA30; 4J002/BG071; 4J002/EL056; 4J002/GP00
US 2004209006	NCL	428/001.100
	ECLA	C09K019/34A; C09K019/38B4B

GI

Search done by Noble Jarrell



AB Liquid crystal films with excellent heat resistance and mech. strength are provided. A liquid crystal film is obtained by fixing an aligned liquid crystal material containing at least a side chain-type polymeric liquid crystalline substance obtained by homopolymerizing the (meth)acrylic portion of a (meth)acrylic compound having an oxetanyl group represented by formula I, or copolymerizing the same with another (meth)acrylic compound and a difunctional low mol. weight liquid crystalline substance having two oxetanyl groups represented by formula II (R¹ = H, CH₃; R², R³, R⁴ = H, CH₃, C₂H₅; L¹, L², L³, L⁴ = single bond, O, OCO, COO; M¹, M² = P¹-L⁵-P²-L⁶-P³, P¹-L⁵-P³, P³, where P¹, P², P³ = Ph, hexyl, naphthyl, tetralin, and as further disclosed in the claims, L⁵, L⁶ = single bond, -CH=CH-, -C≡C-, O, OCO, COO; 1, m, n, o = 0-10).

ST liq crystal film display oxetanyl compd

IT Liquid crystal displays

(liquid crystal film and liquid crystal display device)

IT Optical instruments

(retarders; preparation of oxetanyl compd for liquid crystal display device)

IT 279256-64-3P 677033-48-6P 777084-14-7P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(oxetanyl compd for liquid crystal display device)

IT 503474-65-5P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation of oxetanyl compd for liquid crystal display device)

IT 133945-18-3P 677033-38-4P 777084-13-6P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of oxetanyl compd for liquid crystal display device)

IT 110-52-1, 1,4-Dibromobutane 110-87-2 120-47-8 123-31-9,
1,4-Dihydroxybenzene, reactions 540-51-2, 1-Bromo-2-hydroxyethane
814-68-6, 2-Propenoyl chloride 818-61-1 3047-32-3,
3-Ethyl-3-hydroxymethyloxetane 19812-93-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of oxetanyl compd for liquid crystal display device)

IT 69260-40-8P 125976-71-8P 477949-72-7P 503474-64-4P 777084-12-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of oxetanyl compd for liquid crystal display device)

IT 677033-48-6P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(oxetanyl compd for liquid crystal display device)

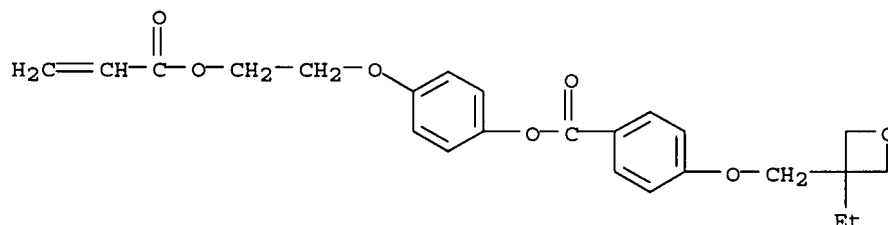
RN 677033-48-6 HCAPLUS

CN Benzoic acid, 4-[(3-ethyl-3-oxetanyl)methoxy]-, 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]phenyl ester, polymer with 4'-cyano[1,1'-biphenyl]-4-yl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 677033-38-4

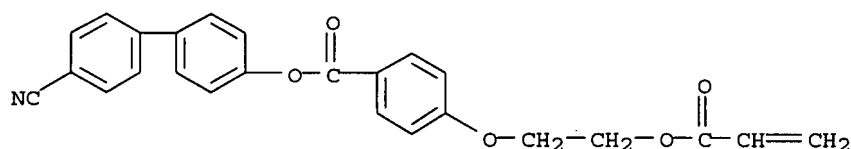
CMF C24 H26 O7



CM 2

CRN 133945-18-3

CMF C25 H19 N O5



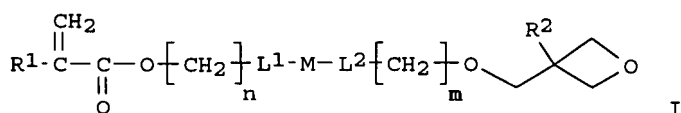
L19 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:286762 HCAPLUS
 DN 140:304210
 ED Entered STN: 08 Apr 2004
 TI (meth)acrylic compound having an oxetanyl group and liquid crystal film
 produced by using the same
 IN Matsumoto, Takuya; Mazaki, Hitoshi; Nakamura, Toru;
 Kobayashi, Masaaki
 PA Nippon Oil Corporation, Japan
 SO Eur. Pat. Appl., 37 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C07D305-06
 ICS G02F001-13; G02B001-00; C09K019-34
 CC 35-2 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 38, 74, 75
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1405850	A1	20040407	EP 2003-103578	20030926
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2004123597	A2	20040422	JP 2002-289226	20021001
JP 2004123882	A2	20040422	JP 2002-289227	20021001
US 2005101752	A1	20050512	US 2003-672946	20030926
CN 1500780	A	20040602	CN 2003-164898	20030929
PRAI JP 2002-289226	A	20021001		
JP 2002-289227	A	20021001		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1405850	ICM	C07D305-06

EP 1405850 ICS G02F001-13; G02B001-00; C09K019-34
 JP 2004123597 ECLA C07D305/06; C09K019/34A
 JP 2004123597 FTERM 4C048/TT02; 4H027/BA13; 4H027/BD12; 4J100/AL08P;
 4J100/BA02P; 4J100/BA15P; 4J100/BC43P; 4J100/BC53P;
 4J100/CA01; 4J100/DA01; 4J100/DA25; 4J100/DA66;
 4J100/JA39
 JP 2004123882 FTERM 2H049/BA03; 2H049/BA06; 2H049/BA42; 2H049/BC09;
 2H049/BC22; 2H091/FA08X; 2H091/FA08Z; 2H091/FA11X;
 2H091/FB02; 2H091/GA01; 2H091/GA06; 2H091/HA07;
 2H091/LA12; 2H091/LA16; 4F071/AA33; 4F071/AA81;
 4F071/AF12; 4F071/AH16; 4F071/BB02; 4F071/BC01;
 4J100/AL08P; 4J100/AL08Q; 4J100/BA02P; 4J100/BA02Q;
 4J100/BA15P; 4J100/BA15Q; 4J100/BA40Q; 4J100/BC43P;
 4J100/BC43Q; 4J100/BC44Q; 4J100/BC53P; 4J100/CA01;
 4J100/CA04; 4J100/DA01; 4J100/DA66; 4J100/JA39
 US 2005101752 NCL 526/319.000
 ECLA C07D305/06; C09K019/34A
 OS MARPAT 140:304210
 GI



- AB The present invention provides a novel compound which is suitable as the starting material of a side-chain type liquid crystalline polymeric substance having a reactive group which is excellent in reactivity upon fixation of the liquid crystal orientation structure. The novel compound is a (meth)acrylic compound having an oxetanyl group represented I, wherein R¹ = H or Me; R² = H, Me, or Et; L¹-M-L² = a mesogen portion; and n, m = 0-10 integer. The present invention also provides a liquid crystal film containing the side-chain type liquid crystalline polymeric substance and a liquid crystal display mounted with such a liquid crystal film. Thus, OXT 101 and Et p-hydroxybenzoate were reacted, hydrolyzed, esterified with protected hydroquinone, and esterified with acryloyl-containing benzoic acid to give an oxetanyl-containing acrylic monomer, which was radical-polymerized to give a liquid crystal polymer with glass transition temperature 81°, weight average mol. weight 39,600, and phase transition (smectic to nematic phase) temperature 170°.
- ST methacrylic compd oxetanyl liq crystal film; ethylhydroxymethyloxetane modified acrylic monomer liq crystal polymer prepn
- IT Liquid crystals, polymeric
 (nematic; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT Acrylic polymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (oxetanyl-containing, liquid crystal polymers; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT Liquid crystal displays
 Liquid crystals, polymeric
 Optical films
 Polarizers
 (preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT Optical instruments
 (retarders; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT 133945-18-3P 677033-39-5P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (comonomer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT 69260-38-4P 69260-40-8P 83883-25-4P 83883-26-5P 125976-71-8P

477949-72-7P 503474-64-4P 677033-29-3P 677033-32-8P 677033-36-2P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (intermediate; preparation of (meth)acrylic compds. having an oxetanyl
 groups for liquid crystal films)

IT 677033-40-8P
 RL: DEV (Device component use); IMF (Industrial manufacture); PEP
 (Physical, engineering or chemical process); PRP (Properties); PYP
 (Physical process); TEM (Technical or engineered material use); PREP
 (Preparation); PROC (Process); USES (Uses)
 (liquid crystal polymer; preparation of (meth)acrylic compds. having an
 oxetanyl groups for liquid crystal films)

IT 677033-44-2P 677033-46-4P
 RL: DEV (Device component use); IMF (Industrial manufacture); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (liquid crystal polymer; preparation of (meth)acrylic compds. having an
 oxetanyl groups for liquid crystal films)

IT 677033-31-7P 677033-41-9P 677033-42-0P 677033-43-1P
 677033-45-3P 677033-47-5P 677033-48-6P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (liquid crystal polymer; preparation of (meth)acrylic compds. having an
 oxetanyl groups for liquid crystal films)

IT 677033-49-7P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (liquid crystal polymer; preparation of (meth)acrylic compds. having an
 oxetanyl groups for liquid crystal films)

IT 503474-65-5P 677033-30-6P 677033-33-9P 677033-34-0P
 677033-35-1P 677033-37-3P 677033-38-4P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (monomer; preparation of (meth)acrylic compds. having an oxetanyl groups for
 liquid crystal films)

IT 110-52-1, 1,4-Dibromobutane 120-47-8, Ethyl p-hydroxybenzoate
 123-31-9, Hydroquinone, reactions 540-51-2, 2-Bromoethyl alcohol
 814-68-6, Acryloyl chloride 818-61-1, 2-Hydroxyethyl acrylate
 3047-32-3, OXT 101 4286-55-9, 6-Bromohexyl alcohol 19812-93-2,
 [1,1'-Biphenyl]-4-carbonitrile, 4'-hydroxy- 58574-03-1 69260-42-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant in monomer preparation; preparation of (meth)acrylic compds. having an
 oxetanyl groups for liquid crystal films)

IT 9012-09-3, Triacetyl cellulose
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; preparation of (meth)acrylic compds. having an oxetanyl groups
 for liquid crystal films)

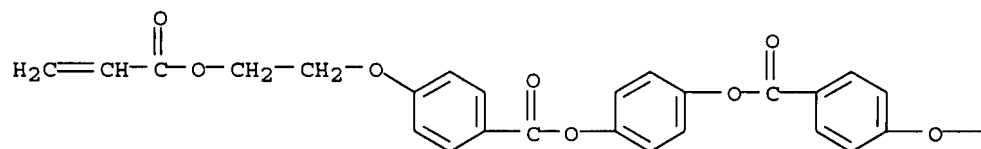
IT 677033-40-8P
 RL: DEV (Device component use); IMF (Industrial manufacture); PEP
 (Physical, engineering or chemical process); PRP (Properties); PYP
 (Physical process); TEM (Technical or engineered material use); PREP
 (Preparation); PROC (Process); USES (Uses)
 (liquid crystal polymer; preparation of (meth)acrylic compds. having an
 oxetanyl groups for liquid crystal films)

RN 677033-40-8 HCAPLUS
 CN Benzoic acid, 4-[(3-ethyl-3-oxetanyl)methoxy]-, 4-[[4-[2-[(1-oxo-2-
 propenyl)oxy]ethoxy]benzoyl]oxy]phenyl ester, polymer with
 4'-cyano[1,1'-biphenyl]-4-yl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate
 (9CI) (CA INDEX NAME)

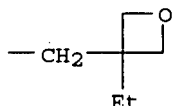
CM 1

CRN 677033-30-6
 CMF C31 H30 O9

PAGE 1-A

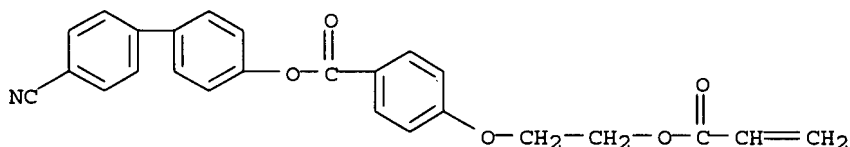


PAGE 1-B



CM 2

CRN 133945-18-3
CMF C25 H19 N O5



=> dval1 h1 ester 120 tot

L20 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:550212 HCAPLUS
DN 139:101523
ED Entered STN: 18 Jul 2003
TI Oxetane ring-containing (meth)acrylate esters, their manufacture, and their use as dental monomers and monomers for grafting polyolefins
IN Miyazaki, Kazuhisa; Ota, Seiji
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07D305-06
ICS A61K006-00; C08F020-28
CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 63

FAN.CNT 1

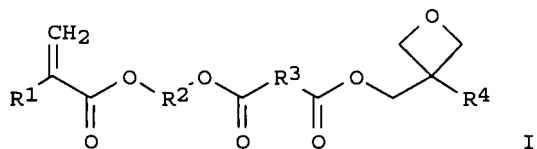
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003201286	A2	20030718	JP 2002-306846	20021022
PRAI	JP 2001-332393	A	20011030		

CLASS

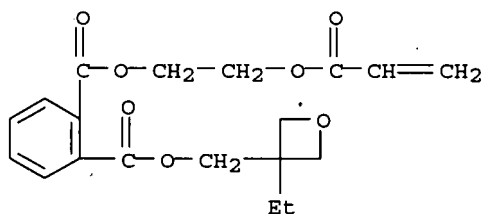
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003201286	ICM	C07D305-06
	ICS	A61K006-00; C08F020-28

Search done by Noble Jarrell

OS MARPAT 139:101523
GI



- AB Title esters I [R1 = H, Me; R2 = (ether bond-containing) linear or branched alkylene; R3 = linear or branched alkylene, arylene; R4 = linear alkyl] are manufactured by esterification of H2C:CR1CO2R2OH (R1, R2 = same as above) with R3Z (R3 = same as above; Z = CO2CO), followed by esterification of the resulting H2C:CR1CO2R2O2CR3CO2H (R1-R3 = same as above) with 3-alkyl-3-hydroxymethyloxetane in the presence of dehydration catalysts. Thus, esterification of 2-hydroxyethyl acrylate with phthalic anhydride gave 2-acryloyloxyethyl phthalate, which was condensed with 3-ethyl-3-hydroxymethyloxetane in the presence of DCC and (diethylamino)pyridine to give the corresponding oxetane derivative
- ST polyolefin grafting oxetane methacrylate; phthalate oxetanylmethyl acryloyloxyethyl manuf dental monomer
- IT Polymerization
(graft; manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT Dental materials and appliances
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT Monomers
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT Polyolefins
RL: MSC (Miscellaneous)
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT 30697-40-6P, Acryloyloxyethyl monophthalate
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT 560110-65-8P 560110-66-9P
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT 818-61-1, 2-Hydroxyethyl acrylate 3047-32-3, 3-Ethyl-3-hydroxymethyloxetane
RL: RCT (Reactant); RACT (Reactant or reagent)
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- IT 560110-65-8P
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(manufacture of oxetane ring-containing (meth)acrylate esters for dental use and monomers for grafting polyolefins)
- RN 560110-65-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, (3-ethyl-3-oxetanyl)methyl
2-[(1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



L20 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2002:907052 HCAPLUS
 DN 138:9662
 ED Entered STN: 29 Nov 2002
 TI Negative photoresist composition for a method for fabricating a semiconductor device
 IN Kozawa, Miwa; Nozaki, Koji; Watanabe, Keiji; Yano, Ei
 PA Fujitsu Limited, Japan
 SO U.S. Pat. Appl. Publ., 24 pp., Cont.-in-part of U.S. Ser. No. 785,306.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM G03F007-038
 ICS G03F007-075; G03F007-004; G03F007-11; G03F007-36; G03F007-30; G03F007-40
 INCL 430270100; 430271100; 430325000; 430326000; 430311000; 430313000
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 35, 38, 76

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002177070	A1	20021128	US 2002-97818	20020315
	US 2001036594	A1	20011101	US 2001-785306	20010220
	JP 2001343748	A2	20011214	JP 2001-93727	20010328
PRAI	JP 2000-89790	A	20000328		
	US 2001-785306	A2	20010220		
	JP 2001-93727	A	20010328		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002177070	ICM	G03F007-038
	ICS	G03F007-075; G03F007-004; G03F007-11; G03F007-36; G03F007-30; G03F007-40
	INCL	430270100; 430271100; 430325000; 430326000; 430311000; 430313000
US 2002177070	NCL	430/270.100
US 2001036594	ECLA	G03F007/038; G03F007/038C; G03F007/075M; G03F007/09M
	NCL	430/270.100
	ECLA	G03F007/038; G03F007/038C; G03F007/075M; G03F007/09M; G03F007/38

GI



I

AB The present invention relates to a neg. photoresist composition containing an alkaline-soluble resin as a base material, in which an oxetane structure represented by I is contained in a structure of the alkaline-soluble resin or in a structure of a compound used in combination with the alkaline-soluble resin.

ST eg resist compn pattern fabricating semiconductor device photolithog

IT Photolithography
Semiconductor device fabrication
(neg. photoresist composition for method for)

IT Photoresists
(neg. photoresist composition for method for fabricating semiconductor device)

IT 343615-46-3P 370588-70-8P 477327-40-5P 477327-41-6P
477327-43-8P 477327-44-9P 477327-45-0P 477327-47-2P
477327-49-4P 477327-50-7P 477327-51-8P 477327-52-9P
477327-54-1P 477327-55-2P 477327-63-2P 477327-73-4P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(neg. photoresist composition for method for fabricating semiconductor device containing)

IT 138517-49-4 402751-39-7
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(neg. photoresist composition for method for fabricating semiconductor device containing)

IT 59269-51-1, Poly(hydroxystyrene)
RL: TEM (Technical or engineered material use); USES (Uses)
(neg. photoresist composition for method for fabricating semiconductor device containing)

IT 477327-43-8P 477327-47-2P 477327-54-1P
477327-55-2P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(neg. photoresist composition for method for fabricating semiconductor device containing)

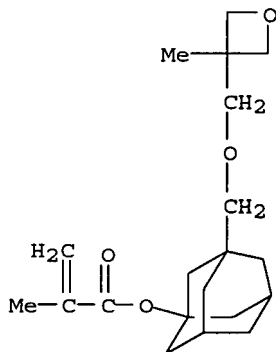
RN 477327-43-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 3-[[[3-methyl-3-oxetanyl)methoxy]methyl]tricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 477327-42-7

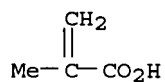
CMF C20 H30 O4



CM 2

CRN 79-41-4

CMF C4 H6 O2



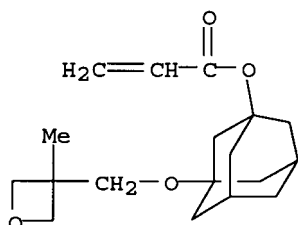
RN 477327-47-2 HCAPLUS

CN Tricyclo[3.3.1.1^{3,7}]decane-1-carboxylic acid, 3-[(1-oxo-2-propenyl)oxy]-, polymer with 3-[(3-methyl-3-oxetanyl)methoxy]tricyclo[3.3.1.1^{3,7}]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 477327-46-1

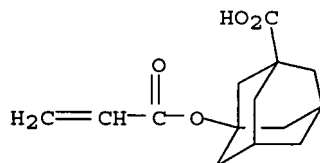
CMF C18 H26 O4



CM 2

CRN 124889-09-4

CMF C14 H18 O4



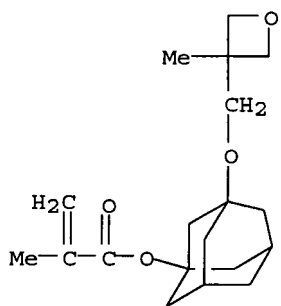
RN 477327-54-1 HCAPLUS

CN Tricyclo[3.3.1.1^{3,7}]decane-1-carboxylic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with hexahydro-3-oxo-3H-3a,7:5,9-dimethanocycloocta[c]furan-5(4H)-yl 2-methyl-2-propenoate and 3-[(3-methyl-3-oxetanyl)methoxy]tricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 477327-53-0

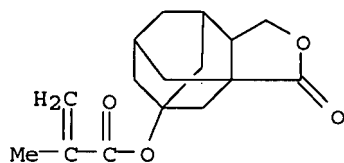
CMF C19 H28 O4



CM 2

CRN 402751-49-9

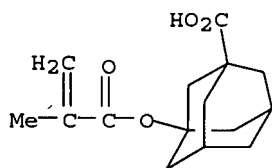
CMF C16 H20 O4



CM 3

CRN 212580-10-4

CMF C15 H20 O4



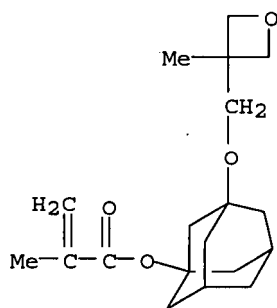
RN 477327-55-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with N-hydroxy-2-methyl-2-propenamide
and 3-[(3-methyl-3-oxetanyl)methoxy]tricyclo[3.3.1.1.3^7]dec-1-yl
2-methyl-2-propenoate (9CI) (CA INDEX NAME) ,

CM 1

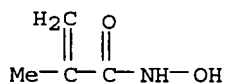
CRN 477327-53-0

CMF C19 H28 O4



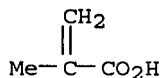
CM 2

CRN 55144-27-9
CMF C4 H7 N O2



CM 3

CRN 79-41-4
CMF C4 H6 O2



L20 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:569632 HCAPLUS
DN 135:137834
ED Entered STN: 07 Aug 2001
TI Unsaturated monocarboxylic esters, their manufacture and radiation-curable compositions therefrom
IN Nishikubo, Tadatomu; Kameyama, Atsushi; Sasaki, Masaki; Kusama, Masatoshi
PA Kanagawa University, Japan; Taiyo Ink Manufacturing Co., Ltd.
SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC C07C069-54; C07C069-82; C07C067-24; C08F020-26
CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37, 42

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001055084	A1	20010802	WO 2001-JP447	20010124
W: CA, CN, IN, JP, KR, SG, US, VN				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1251118	A1	20021023	EP 2001-901533	20010124
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2003009053	A1	20030109	US 2002-202092	20020725

Search done by Noble Jarrell

PRAI JP 2000-18327 A 20000127
 JP 2000-90887 A 20000329
 WO 2001-JP447 W 20010124

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001055084	IC	C07C069-54IC C07C069-82IC C07C067-24IC C08F020-26
WO 2001055084	ECLA	C07C069/533; C07C069/54; C08F020/26; C08F020/28
EP 1251118	ECLA	C07C069/533; C07C069/54; C08F020/26; C08F020/28
US 2003009053	NCL	560/208.000
	ECLA	C07C069/533; C07C069/54; C08F020/26; C08F020/28

AB The unsatd. monocarboxylic ester compound having at least one structure moiety represented by $\text{CH}_2\text{CR}_1(\text{CH}_2\text{OH})\text{CH}_2\text{O}_2\text{CCR}_2:\text{CR}_3\text{R}_4$ ($\text{R}_1 = \text{H}$, C1-6 alkyl; and R_2 , R_3 , and $\text{R}_4 = \text{H}$, C1-6 alkyl, aryl, aralkyl, cyano, fluorine, or furyl) is prepared Stirring terephthalate bis[(3-ethyl-3-oxetanyl)methyl] ester 36.2, methacrylic acid 17.2, tetraphenylphosphonium bromide 2.1, and methoquinone 0.2 g at 130° for 15 h gave a varnish with acid value 23.7 mg-KOH/g. A composition contained this varnish 100, pentaerythritol triacrylate 10, Irgacure 184, silicone defoamer 1, and hydroxyethyl methacrylate 5 parts and gave a UV-cured coat with good THF resistance.

ST unsatd monocarboxylic ester radiation curable compn; terephthalate ethyloxetanylmethyl ester methacrylate coating

IT Coating materials
 (radiation-curable; unsatd. monocarboxylic esters, their manufacture and radiation-curable compns. therefrom)

IT Monomers
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (unsatd. esters; unsatd. monocarboxylic esters, their manufacture and radiation-curable compns. therefrom)

IT 352022-10-7P 352022-12-9P 352022-13-0P 352022-14-1P 352022-15-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (unsatd. monocarboxylic esters, their manufacture and radiation-curable compns. therefrom)

IT 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid, reactions 63943-89-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (unsatd. monocarboxylic esters, their manufacture and radiation-curable compns. therefrom)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

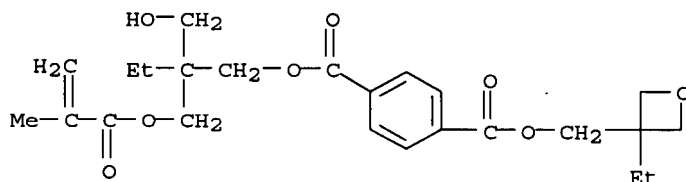
- (1) Asahi Denka Kogyo K K; JP 10158385 A 1998 HCAPLUS
- (2) Kansai Paint Co Ltd; JP 10140019 A 1998 HCAPLUS
- (3) Kansai Paint Co Ltd; JP 10147626 A 1998 HCAPLUS

IT 352022-14-1P 352022-15-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (unsatd. monocarboxylic esters, their manufacture and radiation-curable compns. therefrom)

RN 352022-14-1 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, (3-ethyl-3-oxetanyl)methyl
 2-(hydroxymethyl)-2-[(2-methyl-1-oxo-2-propenyl)oxy]methylbutyl ester
 (9CI) (CA INDEX NAME)



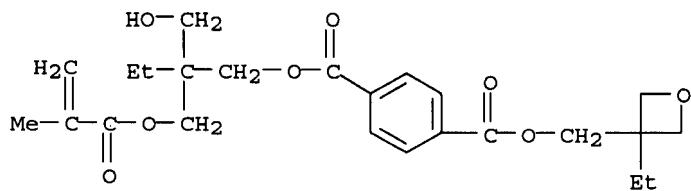
RN 352022-15-2 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, (3-ethyl-3-oxetanyl)methyl
 2-(hydroxymethyl)-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]butyl ester,
 polymer with 3-ethyl-3-oxetanemethanol and 2-[[[3-[(1-oxo-2-propenyl)oxy]-
 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-
 propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX
 NAME)

CM 1

CRN 352022-14-1

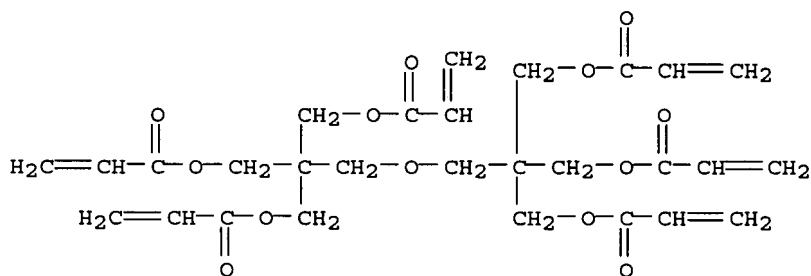
CMF C24 H32 O8



CM 2

CRN 29570-58-9

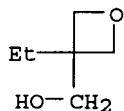
CMF C28 H34 O13



CM 3

CRN 3047-32-3

CMF C6 H12 O2



=> b uspatall

FILE 'USPATFULL' ENTERED AT 11:54:13 ON 31 AUG 2005
 CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 11:54:13 ON 31 AUG 2005
 CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Search done by Noble Jarrell

=> d bib abs fh1tstr hitrn 121 tot

L21 ANSWER 1 OF 3 USPATFULL on STN
 AN 2005:118477 USPATFULL
 TI (Meth) acrylic compound having an oxetanyl group and liquid crystal film
 produced by using same
 IN Matsumoto, Takuya, Yokohama-shi, JAPAN
 Mazaki, Hitoshi, Yokohama-shi, JAPAN
 Nakamura, Toru, Yokohama-shi, JAPAN
 Kobayashi, Masaaki, Yokohama-shi, JAPAN
 PA Nippon Oil Corporation (non-U.S. corporation)
 PI US 2005101752 A1 20050512
 AI US 2003-672946 A1 20030926 (10)
 PRAI JP 2002-289226 20021001
 JP 2002-289227 20021001
 DT Utility
 FS APPLICATION
 LREP AKIN GUMP STRAUSS HAUER & FELD L.L.P., ONE COMMERCE SQUARE, 2005 MARKET
 STREET, SUITE 2200, PHILADELPHIA, PA, 19103-7013, US
 CLMN Number of Claims: 12
 ECL Exemplary Claim: 1
 DRWN 13 Drawing Page(s)
 LN.CNT 1027

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a novel compound which is suitable as the starting material of a side-chain type liquid crystalline polymeric substance having a reactive group which is excellent in reactivity upon fixation of the liquid crystal orientation structure. The novel compound is a (meth)acrylic compound having an oxetanyl group represented by the formula ##STR1## wherein R.sup.1 is hydrogen or methyl, R.sup.2 is hydrogen, methyl, or ethyl, "-L.sub.1-M-L.sub.2-" represents a mesogen portion, and n and m are each an integer of 0 to 10. The present invention also provides a liquid crystal film containing the side-chain type liquid crystalline polymeric substance and a liquid crystal display mounted with such a liquid crystal film.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

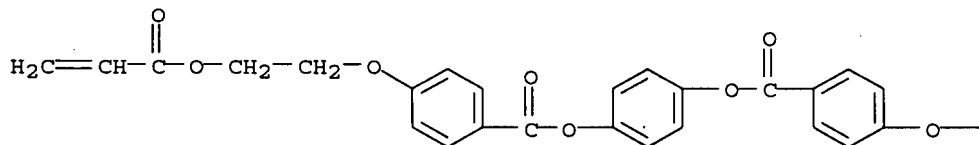
IT 677033-40-8P
 (liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
 RN 677033-40-8 USPATFULL
 CN Benzoic acid, 4-[(3-ethyl-3-oxetanyl)methoxy]-, 4-[[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl ester, polymer with 4'-cyano[1,1'-biphenyl]-4-yl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

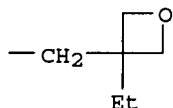
CRN 677033-30-6

CMF C31 H30 O9

PAGE 1-A

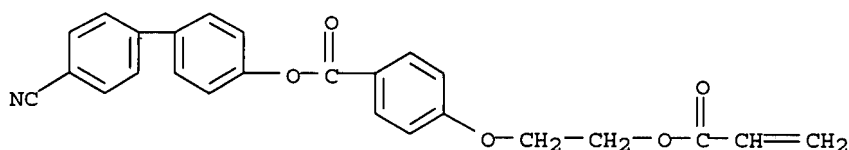


PAGE 1-B



CM 2

CRN 133945-18-3
CMF C25 H19 N O5



- IT 677033-40-8P
(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT 677033-46-4P
(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT 677033-31-7P 677033-47-5P 677033-48-6P
(liquid crystal polymer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)
- IT 677033-30-6P 677033-35-1P 677033-37-3P
677033-38-4P
(monomer; preparation of (meth)acrylic compds. having an oxetanyl groups for liquid crystal films)

L21 ANSWER 2 OF 3 USPATFULL on STN

AN 2005:96606 USPATFULL

TI Polymerizable liquid crystalline composition and liquid crystal film produced from the same

IN Seki, Takashi, Yokohama-shi, JAPAN
Matsumoto, Takuya, Yokohama-shi, JAPAN
Nakamura, Toru, Yokohama-shi, JAPAN
Mazaki, Hitoshi, Yokohama-shi, JAPAN

PI US 2005082513 A1 20050421

AI US 2004-965180 A1 20041014 (10)

PRAI JP 2003-355498 20031015

DT Utility

FS APPLICATION

LREP Adams & Wilks, 31st Floor, 50 Broadway, New York, NY, 10004, US

CLMN Number of Claims: 6

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 723

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Liquid crystalline compositions contain no functional group the synthesis of which is difficult, such as (meth)acrylate and epoxy group and comprise (A) an oxetane compound having an optically active portion, (B) a side chain liquid crystalline polymeric substance having an oxetanyl group, and (C) a photo cation generator and/or a thermal cation generator. The use of the composition can provide a cholesteric-aligned

Search done by Noble Jarrell

liquid crystal film with excellent alignment retention properties after being fixed in the liquid crystal state and mechanical strength, without employing any complicated step such as photo irradiation under an inert gas atmosphere.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 849798-62-5P

(curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

RN 849798-62-5 USPTAFULL

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[4-[(3-ethyl-3-oxetanyl)methoxy]butoxy]benzoate], polymer with 4-cyanophenyl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate and 4-[4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoyl]oxy]phenyl 4-[(3-ethyl-3-oxetanyl)methoxy]benzoate (9CI) (CA INDEX NAME)

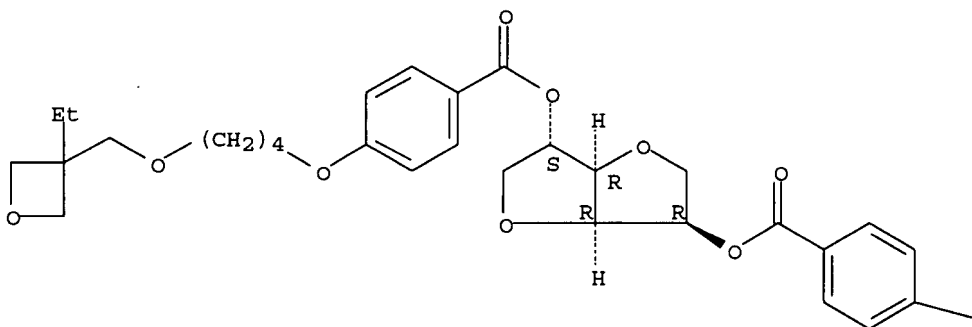
CM 1

CRN 849798-61-4

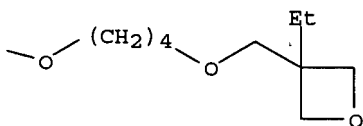
CMF C40 H54 O12

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



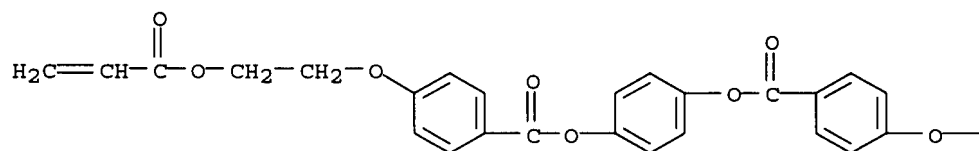
CM 2

CRN 677033-30-6

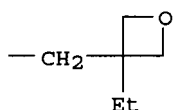
Search done by Noble Jarrell

CMF C31 H30 O9

PAGE 1-A



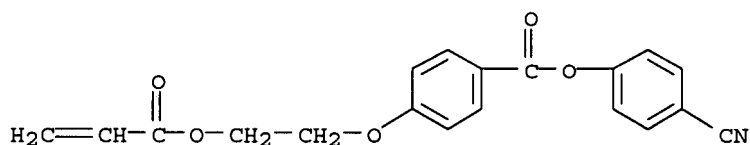
PAGE 1-B



CM 3

CRN 83847-12-5

CMF C19 H15 N O5



IT 849798-62-5P 849798-63-6P 850039-25-7P

(curable liquid crystalline compns. containing optically active oxetane compds. and liquid crystalline polymers having oxetanyl side chains for films with good alignment retention)

L21 ANSWER 3 OF 3 USPATFULL on STN

AN 2004:267469 USPATFULL

TI Liquid crystal film and liquid crystal display device equipped with same

IN Matsumoto, Takuya, Yokohama-shi, JAPAN

Mazaki, Hitoshi, Yokohama-shi, JAPAN

Nakamura, Toru, Yokohama-shi, JAPAN

Seki, Takashi, Yokohama-shi, JAPAN

PI US 2004209006 A1 20041021

AI US 2004-825557 A1 20040414 (10)

PRAI JP 2003-114322 20030418

DT Utility

FS APPLICATION

LREP ADAMS & WILKS, ATTORNEYS AND COUNSELORS AT LAW, 31st FLOOR, 50 BROADWAY, NEW YORK, NY, 10004

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN 10 Drawing Page(s)

LN.CNT 1245

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Liquid crystal films with excellent heat resistance and mechanical strength are provided.

Search done by Noble Jarrell

A liquid crystal film is obtained by fixing an aligned liquid crystal material containing at least a side chain-type polymeric liquid crystalline substance obtained by homopolymerizing the (meth)acrylic portion of a (meth)acrylic compound having an oxetanyl group represented by formula (1) below or copolymerizing the same with another (meth)acrylic compound and a difunctional low molecular weight liquid crystalline substance having two oxetanyl groups represented by formula (2): ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 677033-48-6P

(oxetanyl compd for liquid crystal display device)

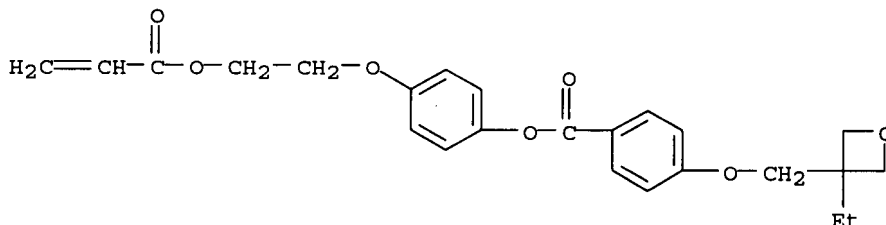
RN 677033-48-6 USPTAFULL

CN Benzoic acid, 4-[(3-ethyl-3-oxetanyl)methoxy]-, 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]phenyl ester, polymer with 4'-cyano[1,1'-biphenyl]-4-yl 4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 677033-38-4

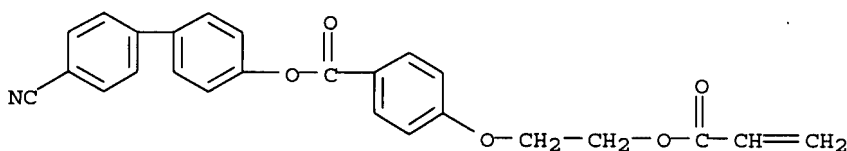
CMF C24 H26 O7



CM 2

CRN 133945-18-3

CMF C25 H19 N O5



IT 677033-48-6P

(oxetanyl compd for liquid crystal display device)

IT 677033-38-4P

(preparation of oxetanyl compd for liquid crystal display device)

=> d:\bib\abs\hitestr\122\tot

L22 ANSWER 1 OF 2 USPTAFULL on STN

AN 2003:11348 USPTAFULL

TI Unsaturated monocarboxylic ester compound, process for producing the same, and composition curable with actinic energy ray

IN Nishikubo, Tadatomi, Fujisawa-shi, JAPAN

Kameyama, Atsushi, Yokohama-shi, JAPAN

Sasaki, Masaki, Asaka-shi, JAPAN

Kusama, Masatoshi, Sakado-shi, JAPAN

PI US 2003009053

A1 20030109

Search done by Noble Jarrell

AI US 2002-202092 A1 20020725 (10)
 RLI Continuation of Ser. No. WO 2001-JP447, filed on 24 Jan 2001, UNKNOWN
 PRAI JP 2000-18327 20000127
 JP 2000-90887 20000329
 DT Utility
 FS APPLICATION
 LREP RADER, FISHMAN & GRAUER, PLLC, 1233 20th Street, Suite 501, N.W.,
 Washington, DC, 20036
 CLMN Number of Claims: 16
 ECL Exemplary Claim: 1
 DRWN 1 Drawing Page(s)
 LN.CNT 958

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An unsaturated monocarboxylic ester compound has at least two structures represented by the following general formula (1): ##STR1##

wherein R.sup.1 represents a hydrogen atom or an alkyl group of 1 to 6 carbon atoms, and R.sup.2, R.sup.3 and R.sup.4 independently represent a hydrogen atom, an alkyl group of 1 to 6 carbon atoms, an aryl group, an aralkyl group, a cyano group, a fluorine atom, or a furyl group.

A curable composition comprises (A) the unsaturated monocarboxylic ester compound having two or more structures represented by the general formula (1) mentioned above, (B) a polymerization initiator, and optionally (C) a diluent.

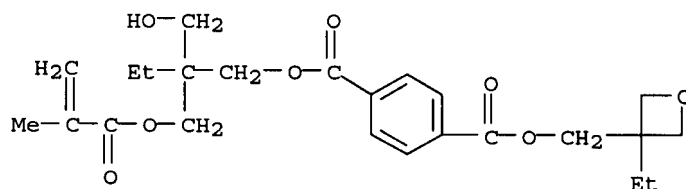
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 352022-14-1P 352022-15-2P

(unsatd. monocarboxylic esters, their manufacture and radiation-curable compns. therefrom)

RN 352022-14-1 USPATFULL

CN 1,4-Benzenedicarboxylic acid, (3-ethyl-3-oxetanyl)methyl
 2-(hydroxymethyl)-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]butyl ester
 (9CI) (CA INDEX NAME)



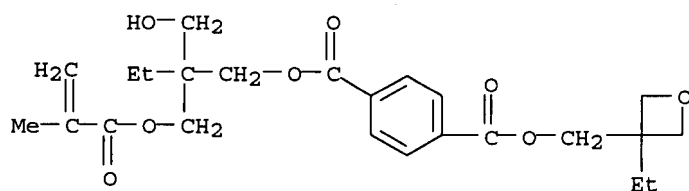
RN 352022-15-2 USPATFULL

CN 1,4-Benzenedicarboxylic acid, (3-ethyl-3-oxetanyl)methyl
 2-(hydroxymethyl)-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]butyl ester,
 polymer with 3-ethyl-3-oxetanemethanol and 2-[[3-[(1-oxo-2-propenyl)oxy]-
 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-
 propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX
 NAME)

CM 1

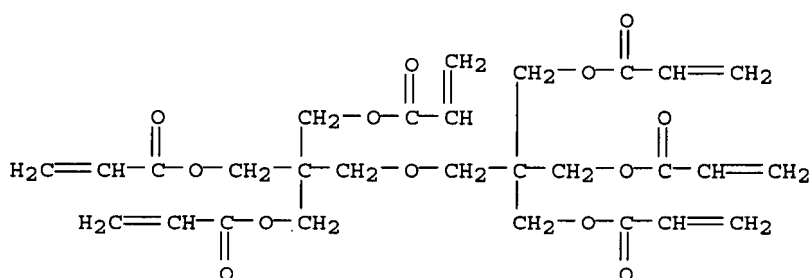
CRN 352022-14-1

CMF C24 H32 O8



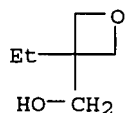
CM 2

CRN 29570-58-9
CMF C28 H34 O13



CM 3

CRN 3047-32-3
CMF C6 H12 O2



```
L222 ANSWER 2 OF 2 USPATFULL on STN
AN      2002:314594  USPATFULL
TI      Negative resist composition, a method for forming a resist pattern
        thereof, and a method for fabricating a semiconductor device
IN      Kozawa, Miwa, Kawasaki, JAPAN
        Nozaki, Koji, Kawasaki, JAPAN
        Watanabe, Keiji, Kawasaki, JAPAN
        Yano, Ei, Kawasaki, JAPAN
PA      Fujitsu Limited, Kawasaki, JAPAN (non-U.S. corporation)
PI      US 2002177070      A1      20021128
AI      US 2002-97818      A1      20020315 (10)
RLI     Continuation-in-part of Ser. No. US 2001-785306, filed on 20 Feb 2001,
        PENDING
PRAI    JP 2000-89790      20000328
        JP 2001-93727      20010328
DT      Utility
FS      APPLICATION
LREP    ARMSTRONG, WESTERMAN & HATTORI, LLP, 1725 K STREET, NW., SUITE 1000,
        WASHINGTON, DC, 20006
CLMN    Number of Claims: 20
ECL     Exemplary Claim: 1
```

DRWN 2 Drawing Page(s)

LN.CNT 1537

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A negative resist composition containing an alkaline-soluble resin as a base material, in which an oxetane structure represented by the following formula (1): ##STR1##

is contained in a structure of the alkaline-soluble resin or in a structure of a compound used in combination with the alkaline-soluble resin, is disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 477327-43-8P 477327-47-2P 477327-54-1P

477327-55-2P

(neg. photoresist composition for method for fabricating semiconductor device containing)

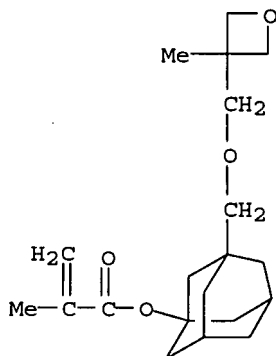
RN 477327-43-8 USPATFULL

CN 2-Propenoic acid, 2-methyl-, polymer with 3-[[(3-methyl-3-oxetanyl)methoxy]methyl]tricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 477327-42-7

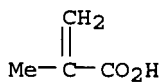
CMF C20 H30 O4



CM 2

CRN 79-41-4

CMF C4 H6 O2



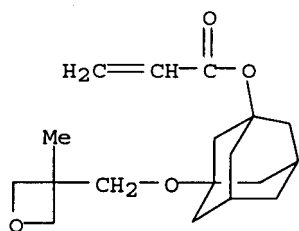
RN 477327-47-2 USPATFULL

CN Tricyclo[3.3.1.1^{3,7}]decane-1-carboxylic acid, 3-[(1-oxo-2-propenyl)oxy]-, polymer with 3-[(3-methyl-3-oxetanyl)methoxy]tricyclo[3.3.1.1^{3,7}]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 477327-46-1

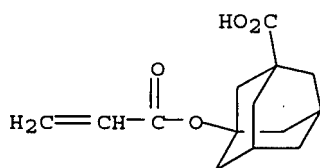
CMF C18 H26 O4



CM 2

CRN 124889-09-4

CMF C14 H18 O4



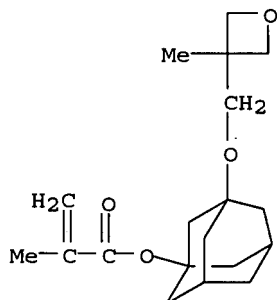
RN 477327-54-1 USPATFULL

CN Tricyclo[3.3.1.1.3]decane-1-carboxylic acid, 3-[(2-methyl-1-oxo-2-propenyl)oxy]-, polymer with hexahydro-3-oxo-3H-3a,7:5,9-dimethanocycloocta[c]furan-5(4H)-yl 2-methyl-2-propenoate and 3-[(3-methyl-3-oxetanyl)methoxy]tricyclo[3.3.1.1.3,7]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1.

CRN 477327-53-0

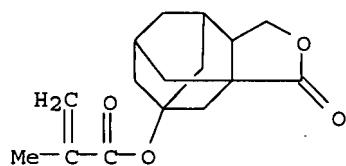
CMF C19 H28 O4



CM 2

CRN 402751-49-9

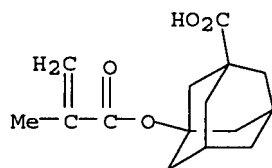
CMF C16 H20 O4



CM 3

CRN 212580-10-4

CMF C15 H20 O4



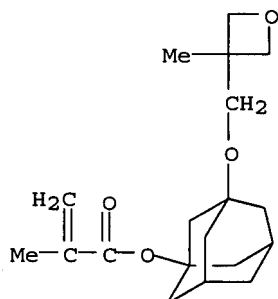
RN 477327-55-2 USPATFULL

CN 2-Propenoic acid, 2-methyl-, polymer with N-hydroxy-2-methyl-2-propenamide
and 3-[(3-methyl-3-oxetanyl)methoxy]tricyclo[3.3.1.1^{3,7}]dec-1-yl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 477327-53-0

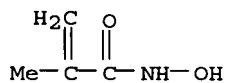
CMF C19 H28 O4



CM 2

CRN 55144-27-9

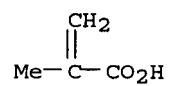
CMF C4 H7 N O2



CM 3

CRN 79-41-4

CMF C4 H6 O2



=> b home

FILE 'HOME' ENTERED AT 11:54:47 ON 31 AUG 2005

=>